

**Power device with a short-circuit detector****Publication number:** JP2000509933T**Publication date:** 2000-08-02**Inventor:****Applicant:****Classification:**

**- international:** G01R31/40; H03K17/082; G01R31/00; G01R31/40;  
H03K17/082; G01R31/00; (IPC1-7): H03K17/08;  
H01L29/78; H03K17/687

**- european:** G01R31/40; H03K17/082B

**Application number:** JP19980529235T 19980202

**Priority number(s):** GB19970003453 19970219; GB19970016839  
19970808; WO19981B00138 19980202

**Also published as:**

WO9837630 (A1)  
EP0904636 (A1)  
US5942886 (A1)  
EP0904636 (A0)  
EP0904636 (B1)

more &gt;&gt;

[Report a data error here](#)

Abstract not available for JP2000509933T

Abstract of corresponding document: **US5942886**

A power device circuit comprises a power semiconductor device (MPWR) in series with a load (LD) between a power supply line (1) and a return line (2), and a short-circuit detector (R1, R2, . . . R1', R2', . . . CP) for determining whether the load (LD) is short-circuit. The short-circuit detector examines the distribution of the supply-to-return voltage (Vbg) between the device (MPWR) and the load (LD) by comprising a comparator (CP) which has a first input (+) coupled to a series node (11) between the device and load and a second input (+) from circuit means (R1, R2, . . . , R1', R2', . . . ) coupled between the supply and return lines (1 and 2) to provide the second input (-) with a voltage supply signal (Vbg') which is a predetermined function of the supply-to-return voltage (Vbg). By so comparing the voltage (Vdl) at the series node (11) with the predetermined function of the supply-to-return voltage (Vbg), the detector (SC) provides an output signal (sc) indicating whether or not a short-circuit is present. Preferably pinch-resistors (R1,R2) or a voltage-clamp (ZD) are used with the circuit means (R1, R2, . . . , R1', R2', . . . ), so that the predetermined function of the supply-to-return voltage (Vbg) input to the comparator (CP) varies with the magnitude of the supply-to-return voltage (Vbg). By this means a lower percentage of the supply-to-return voltage (Vbg) can be input at a higher magnitude of the supply-to-return voltage (Vbg) than at a lower magnitude.

---

Data supplied from the **esp@cenet** database - Worldwide